

with the diuretic and 102 participants with controlled hypertension (HTN) by triple therapy. Before starting of treatment pts. were underwent ABPM, ultrasonography of heart and carotid arteries, laboratory tests (serum potassium, creatinine, plasma aldosterone, active renin concentration (ARC) and NT-proBNP, 24-h urinary excretion sodium and potassium).

Results: Two groups of pts were comparable for age, sex, body mass index. Initial BP levels were higher in rHTN group. Among rHTN pts the prevalence concentric left ventricular hypertrophy (LVH) was 100 % and 62 %, respectively, in pts with HTN. Frequency of carotid atherosclerosis (60 vs. 37%) and intima-media thickness were significantly higher at rHTN than at HTN pts. Pts with rHTN had lower GFR than pts of comparison group. Plasma aldosterone (26.1 ± 1.4 vs 21.3 ± 1.0 ng/dl, $p < 0.05$), ARC (21.9 ± 5.8 vs 8.7 ± 1.2 ng/l, $p < 0.05$), NT-proBNP (193.5 ± 26.3 vs 109.2 ± 21.7 pg/ml, $p < 0.05$), 24-h urinary excretion sodium (198.3 ± 4.4 vs 182.5 ± 5.2 mmol/24hr, $p < 0.05$) were higher and serum potassium (4.4 ± 0.1 vs 4.7 ± 0.1 mmol/l, $p < 0.05$) were lower in patients with rHTN compared to HTN pts. NT-proBNP, 24-h urinary excretion sodium, ARC and GFR were significant predictors of BP in multivariate modeling.

Conclusion: rHTN accompanied with concentric LVH, atherosclerotic and hypertensive damage of carotid arteries, worsening of renal function. Intravascular volume expansion, high dietary sodium and pronounced activation of RAAS may contribute to the pathogenesis of rHTN.

Keywords: resistant hypertension.

A13610 ADMINISTRATION-TIME-DEPENDENT EFFECTS OF TRIPLE-COMBINATION OF ANTIHYPERTENSIVE MEDICATION IN RESISTANT AND CONTROLLED HYPERTENSION

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Objectives: to evaluate different effects on circadian pattern of blood pressure (BP) depending on the time of administration of fixed-dose triple-combination (FDTC) in resistant (RAH) and controlled (CAH) hypertension patients (pts).

Methods: We examined 78 pts with RAH which was confirmed by the office and ambulatory BP monitoring (ABPM) despite the use of FDTC and 100 pts with CAH by triple therapy. All pts at baseline were randomized to consume FDTC in the morning or at bedtime. Office BP and 24-h ABPM were evaluated at baseline and after 3 months. Differences in efficacy depending on the time of day of FDTC administration on circadian BP profile were studied separately in the groups of pts with RAH and CAH.

Results: After 3 months of treatment CAH pts achieved targets of clinical BP and 24-h ABPM levels irrespective of the time administration of FDTC. There was attenuated prevalence of non-dipping at the final evaluation (43 % vs 14 %, $P < 0.01$) in bedtime treatment, but some non-dipper pts (75 %) had over-dipping pattern. The morning treatment schedule despite the normalization of BP wasn't associated with restoring nondipping BP pattern in 70 % CAH pts. In RAH pts reduction in average 24-h BP was greater with night-time administration than morning ($-23.8/ -16.7$ mm Hg vs. $-16.1/ -9.4$ mm Hg, $P < 0.05$) both due lowering effect to daytime and nighttime BP. Bedtime treatment was related with correcting the dipping BP profile in nondipping RAH pts (80 % vs 33 % in pts on morning treatment, $P < 0.01$).

Conclusion: The morning-to-evening switch in medication administration of FDTC represents optimizing treatment in RAH. In CAH pts, bedtime dosing of FDTC demonstrated extreme dipping BP patterns even in pts with a blunted fall in night-time BP consequently medication is required to divide into twice for ingestion.

Keywords: chronotherapy, resistant hypertension, controlled hypertension, treatment

A11629 RELATIONSHIP BETWEEN MATRIX METALLOPROTEINASE 12, LOW-GRADE INFLAMMATION AND KIDNEY FUNCTION IN PATIENTS WITH RESISTANT HYPERTENSION

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Objectives: There are data that matrix metalloproteinase 12 (MMP-12) modulates glomerular fibrogenesis and inflammation. The aim of study was to investigate relationship between MMP-12 and kidney function in patients with resistant hypertension (RH).

Methods: The study included 78 patients with RH (gr.1 pts) which was confirmed by office and ambulatory blood pressure monitoring and 67 patients with controlled hypertension (gr.2 pts). In all patients MMP-12 plasma activity, inflammatory marker high sensitive C-reactive protein (hs-CRP) were evaluated. Glomerular filtration rate (GFR) assessment was based on 24-hour endogenous creatinine clearance.

Results: Patients of both groups were comparable for age, gender and body mass index ($P > 0.05$). GFR was significantly lower ($p < 0.05$) and hs-CRP level was higher in gr.1 pts than in gr.2 pts ($p < 0.05$). Plasma MMP-12 levels were significantly higher in RH patients comparing to the patients with controlled hypertension: 0.165 ± 0.012 vs 0.138 ± 0.011 nmol/mL/min ($P < 0.05$) and independently associated with GFR ($r = -0.403$, $P < 0.05$) and hs-CRP ($r = 0.396$, $P < 0.05$). We stated a negative correlation between hs-CRP and GFR ($r = -0.365$, $p < 0.05$).

Conclusion: MMP-12 plasma activity in RH patients is elevated comparing to it in patients with controlled hypertension and associated with the deterioration of kidney function and hs-CRP, suggesting an important role for MMP-12 and low-grade inflammation in the kidney injury in hypertensive patients and in the development the resistance hypertension.

Keywords: matrix metalloproteinase 12, inflammation, resistant hypertension, kidney function

A11645 INFLUENCE OF DECONGESTING THERAPY ON RENAL FUNCTION IN PATIENTS WITH ACUTE DECOMPENSATED HEART FAILURE, DEPENDING ON THE PRESENCE OF PREVIOUS HYPERTENSION

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Objectives: To evaluate the influence of decongesting therapy on renal function in patients with acute decompensated heart failure (ADHF), depending on the presence of previous hypertension.

Methods: We studied 67 patients which were divided into two groups: Gr.1 pts ($n = 40$) with previous hypertension, Gr.2pts. ($n = 27$) without it. Two groups of patients were comparable for age, gender, presence of diabetes mellitus and body mass index. Glomerular filtration rate (GFR) assessment (based on 24-hour endogenous creatinine clearance) was performed at admission (Day 1) and after aggressive decongestive therapy on Day 3. All patients underwent neutrophil gelatinase-associated lipocalin (NGAL) measurement on Day 1 and Day 3. Acute Kidney Injury Network (AKIN) classification was used to evaluate acute kidney injury.

Results: Gr. 1 pts had significantly lower comparing to Gr. 2 pts GFR ($p < 0.05$) and wasn't differ by NGAL ($p > 0.05$) on Day1. After aggressive decongestive therapy (Day 3) GFR decreased more significantly in Gr. 1 pts than in Gr.2 pts.: for $27.7 \pm 1.4\%$ vs $9.4 \pm 1.7\%$ ($p < 0.05$). NGAL did not change significantly in Gr.2 pts. and increased from 147.6 ± 18.5 ng/mL to 162.4 ± 20.3 ng/mL ($p < 0.05$) in Gr. 1 pts.

Conclusion: In patients with ADHF and previous hypertension aggressive decongestive therapy can accelerate renal injury progression obviously due to existing underlying hypertensive nephropathy.

Keywords: hypertension, heart failure, renal function

A11684 AMBULATORY PARAMETERS OF BLOOD PRESSURE IN PATIENTS WITH DIFFERENT ETIOLOGY OF END-STAGE RENAL DISEASE

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Objectives: to study parameters of the peripheral and central hemodynamics during interdialytic period in patients with different etiology of end-stage renal disease (ESRD)

Methods: in 68 patients with ESRD on maintenance hemodialysis (HD) 44-hour parallel ambulatory monitoring of blood pressure (BP) in the brachial artery and the aorta in interdialytic period was performed using a validated oscillometric device. The results were estimated depending on the etiology of ESRD: due to the primary kidney diseases or arterial hypertension (AH) and/or diabetes mellitus (DM). Mann-Whitney test was considered significant if $p < 0.05$

Results: patients with ESRD due to AH and/or DM to ESRD had higher levels of clinical systolic BP (SBP) before (156 [143;168] and 146 [136;155] mm Hg.)